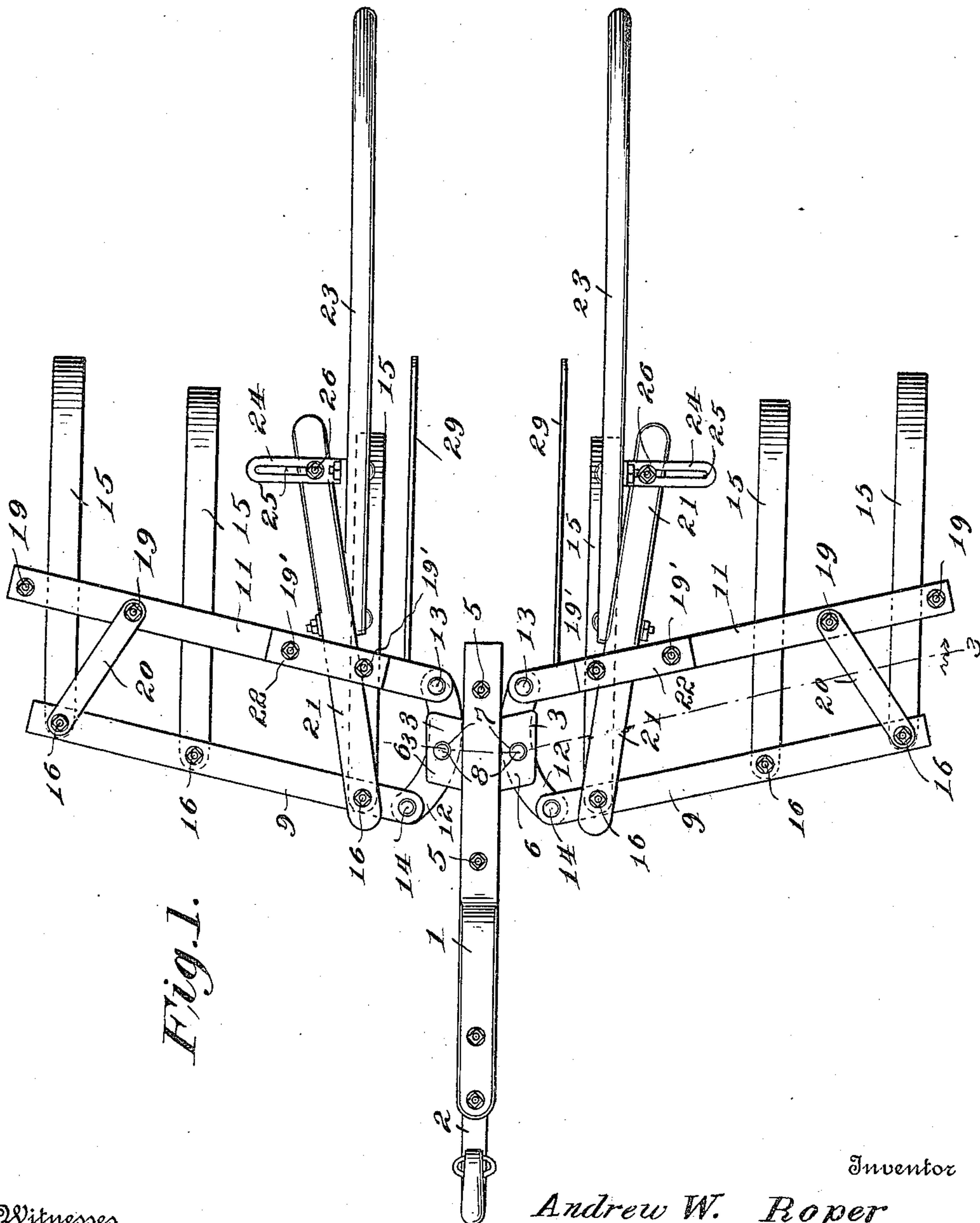


993,880.

A. W. ROPER.
WALKING CULTIVATOR.
APPLICATION FILED DEC. 20, 1910.

Patented May 30, 1911.

2 SHEETS—SHEET 1.



Witnesses

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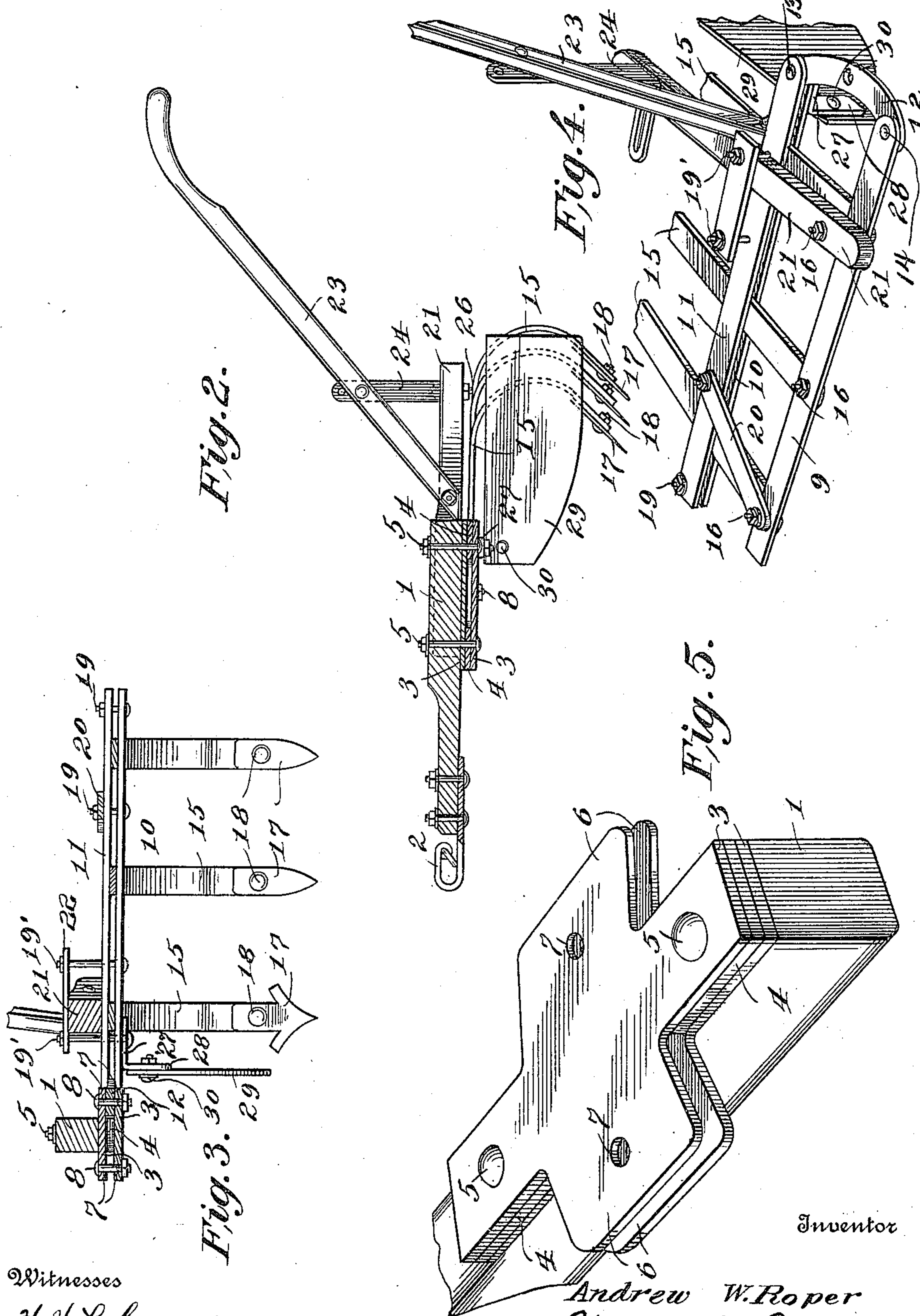
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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

ANDREW WASHINGTON ROPER, OF FRANKSTON, TEXAS.

WALKING-CULTIVATOR.

993,880.

Specification of Letters Patent. Patented May 30, 1911.

Application filed December 20, 1910. Serial No. 598,326.

To all whom it may concern:

Be it known that I, ANDREW WASHINGTON ROPER, a citizen of the United States of America, residing at Frankston, in the county of Anderson and State of Texas, have invented new and useful Improvements in Walking-Cultivators, of which the following is a specification.

This invention relates to walking cultivators, and it has for one of its objects to produce a device of this class including wings or side members which are connected with a draft element for pivotal movement in a simple and efficient manner.

A further object of the invention is to simplify and improve the construction of the individual wings of the plow or cultivator.

A further object of the invention is to produce a device of the character described which shall be simple in construction and thoroughly efficient in operation.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claims may be resorted to when desired.

In the drawings,—Figure 1 is a top plan view of a cultivator constructed in accordance with the invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view taken on the line 3—3 in Fig. 1. Fig. 4 is a perspective view showing one of the wings detached from the draft element. Fig. 5 is a perspective detail view of the rear end of the draft element.

Corresponding parts in the several figures are denoted by like characters of reference.

The draft element of the improved cultivator consists of a beam or tongue 1 having at its front end a clevis 2 for the attachment of the draft and provided upon its underside adjacent to its rear end with a clamping device for the mounting of the wings of the cultivator, said clamping de-

vice being composed of two cruciform plates 3, 3 spaced apart adjacent to their front and rear ends by washers or spacing blocks 4 which are apertured for the passage of the bolts 5 whereby the clamping device is secured upon the beam or tongue. The laterally extending arms 6 of the cruciform plates 3 are provided with apertures 7 for the passage of the bolts 8 upon which the wings of the cultivator are pivotally mounted, as will be presently more fully described. Each of the cultivator wings is composed of a front bar 9 and two rear bars 10, 11 which are disposed one above the other in parallel relation to the front bar 9. An arcuate end bar 12 connects the inner end of the front bar 9 with the inner ends of the rear bars 10, 11 between which the said end bar is interposed for the passage of a connecting bolt 13. A similar bolt 14 serves to connect the front end of the end bar 12 with the underside of the front bar 9. Spring teeth 15 are pivotally connected with the front bar 9 by means of bolts 16, said teeth being extended rearwardly between the rear bars 10, 11 behind which they are curved downwardly and forwardly in the usual manner, said teeth being provided with earth engaging points or blades 17 of any suitable and desirable construction which are preferably mounted detachably upon the shanks of the teeth by means of bolts 18. The rear bars 10, 11 are connected at their outer ends, and intermediate the teeth 15, by means of clamping bolts 19 whereby said bars may be tightened together so as to clamp and hold the teeth 15 in adjusted position. One of the bolts 19 is connected with one of the bolts 16 by means of a link brace 20 whereby the rear bars are sustained in parallel relation to the front bar.

It will be readily seen that by loosening the nuts upon the clamping bolts 19 the teeth 15 may be adjusted at various angles with relation to the front bars 9 of the wings and that by retightening the nuts upon the bolts, the teeth will be securely clamped between the top and bottom rear bars 10, 11, being thereby securely held in adjusted position.

Mounted upon the upper end of the bolt 16, whereby the inner tooth 15 of each wing is connected with the front bar 9, is a frame bar 21 which extends rearwardly directly above such inner tooth 15, and between the upwardly extended ends of the clamping

bolts, specially designated 19', adjacent to such inner tooth. The upper ends of the clamping bolts 19' are connected by a clip plate 22 extending across the frame bar 21, which latter may thus, by loosening the nuts upon the bolts 19' be adjusted at various angles with reference to the front bar 9. Pivottally connected with the inner side face of each frame bar 21 is the front end of a handle bar 23, the rear end of which is adjustably connected with the upper side of the frame bar near the rear end of the latter by means of an L-shaped brace 24, the foot of which is provided with a slot 25 for the passage of the connecting bolt 26 and thereby permitting the adjustment to be made with reference to said bolt.

Securely mounted upon the underside of the lower rear bar of each wing by means of the bolt 13 is an L-shaped bracket 27 upon the downward extending arm of which, 28, a fender plate 29 is suitably secured, as by means of a bolt 30.

The wings of the improved cultivator, which are identical in every respect except that they are made right and left for the two sides of the machine, are pivottally connected with the draft element by means of bolts 8 extending through the apertures 7 in the arms 6 and through corresponding apertures in the arcuate bars 12 at the inner ends of the wings, said arcuate bars being inserted between the arms 6 of the upper and lower cruciform plates 3, 3. Owing to the arcuate shape of the bars 12, the latter may be disposed in close proximity to the draft element and yet in such a manner as to permit the wings to swing freely in an approximately horizontal plane to any extent that may be needed for the proper adjustment of said wings when the device is in operation. It will also be seen that by this construction a very compact, durable and easily operated implement is secured.

In the operation of this invention, the draft is applied to the clevis at the front end of the beam or tongue which constitutes the draft element, and the operator guides the implement by means of the handles. It will be observed that each wing or side member of the cultivator comprises a frame including the front bar and the rear bars 10, 11, which are disposed in parallel relation and which are maintained in such relation by the arcuate bars 12 and the braces 20. The spring teeth may be readily adjusted at various angles with reference to the front bars 9 with which they are pivottally connected by first loosening and again retightening the clamping bolts 19, 19', the

teeth being properly adjusted with reference to the line of draft, and it being evident that the distance between the spring teeth will be varied by swinging the wings upon the pivots 8, forwardly or rearwardly, as may be required, previous to the proper adjustment of the teeth with reference to the line of draft. It also will be noticed that said spring teeth are not weakened by additional bolt holes, their rear ends being clamped between the top and bottom rear bars 10, 11 in such a manner as to permit any desired adjustment of the teeth to be readily effected. The advantage of this arrangement will be readily understood and appreciated, it being well known that spring teeth, when weakened by bolt holes near their rear ends are extremely liable to break under the stress to which they are subjected in operation. By the improved construction herein shown this danger is avoided, and a simple, durable and efficient implement is provided.

Having thus described the invention, what is claimed as new, is:—

1. In a device of the character described, a draft element, a clamping device consisting of two cruciform plates spaced apart and connected with the underside of the draft element and including apertured arms extending beyond the sides of the draft element, and implement-carrying wings provided at their inner ends with arcuate bars mounted between and pivottally connected with the laterally extending arms of the clamping device extending at the sides of the draft element.

2. In a device of the character described, a draft element, and wings pivottally connected therewith, each of said wings including a front bar, two rear bars disposed in parallel relation thereto, an arcuate end bar connecting the inner ends of the front and rear bars, a link brace connecting the outer ends of the front and rear bars, teeth pivottally connected with the front bar and extending between the rear bars, clamping bolts connecting the front and rear bars intermediate the teeth, some of said clamping bolts being extended upwardly, a frame bar connected pivottally with the front bar and extending rearwardly between the upwardly extending clamping bolts, and a clip plate connecting said clamping bolts.

In testimony whereof I affix my signature in presence of two witnesses.

ANDREW WASHINGTON ROPER.

Witnesses:

HENRY HENDERSON,
G. L. BILLINGSLEY.